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10/661,023	09/12/2003	Robert W. Yoho SR.	YD05/05	6808

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EXAMINER

FORD, JOHN K

ART UNIT PAPER NUMBER

3753

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary****Application No.**

10/661,023

**Applicant(s)**

YOHO, ROBERT W.

**Examiner**

John K. Ford

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

Copies of the prior art relied upon in the rejections of claims 1-7 are already in applicant's possession and are not, redundantly, being provided here.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicant's disclosure is incomprehensible because none of the drawing figures 1-17 contain reference numerals that are necessary to understand the disclosure.

Moreover, as to claims 1, 5, and 6 applicant's disclosure of the how this device is controlled is incomprehensible. The disclosure of the way in which the "water mixing valves", "3 – way valves" and "2- way actuator valves" are all controlled by the thermostat in the space, in each of the heating water circuit and the cooling water circuit, is not adequately explained to permit meaningful examination to take place or for one of ordinary skill to construct the device. Exacerbating the problem is the fact that Figures 8 and 9 do not appear to show any way that the flow through the heat exchanger can be stopped using the aforementioned valves and the piping system for the hot and cold water circuits. Regardless of whether these valves are open or closed, water is always able to flow through the heat exchanger. Figure 18 only shows one

water-mixing valve at 80. The three-way valves 82 and two-way actuator valves 84 are not shown in Figure 18.

Avoid any new matter in responding to this rejection.

Adding reference numerals, on the order of a hundred or more, constitutes "new matter" at this juncture, unless applicant can show that one of ordinary skill would, necessarily, be able to uniquely associate each reference numerals with a particular piece of disclosed structure in the drawing Figures.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 5, and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

From Figures 8 and 9 it appears that there is only one three-way valve in the cold water circuit (Figure 8) and only one mix valve 80 in the hot water circuit. Moreover by conventional hydraulic symbols, elements 80 are one of "clean-outs" or "traps" or "strainers", but not valves. That aside, the Examiner doesn't understand why valves 80 are referred to as "mix valves". What are they mixing? At best it appears they can only start stop and modulate flow through the supply pipe.

Claims 8-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not understood what is meant by "feed side" and "return side" in regard to the sprinkler system. Where is this disclosed in the drawings and specification? Where are the associated "feed pipes" and "return pipes" and "feed coupling pipes" and "return coupling pipes" disclosed? What are they? The penultimate paragraph of claim 8 is incomprehensible without some diagrammed illustration to disclose it. Figure 19 does not appear to disclose anything but a plurality of pipes assembled almost randomly. The supply and return appear to connect together at many points in Figure 19. Is this correct? In addition, claim 11 lacks an antecedent claim number.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Rolin (Fig. 1) and Komarnicki (Fig. 6).

Rolin, fig. 1, shows a schematic of a typical prior art building conditioning system feeding air to the building (1) through a supply duct (2) and withdrawing air through an exhaust duct (3).

Fans 24 and 25 are shown. A thermal exchange unit 4 is shown. A hot water heating system (5) and a cold water cooling system (6) are shown in Figure 1. Each of these is controlled responsive to a thermostat (16, 17) by valves 22 and 23.

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Lacking in Rolin is an explicit showing of unit 4 being mounted on a roof and the conventional supply ducts, return ducts and registers in the building. Komarnicki shows a roof mounted recovery unit 54 in Figure 6 and conventional ductwork and registers.

To have located thermal exchange unit 4 of Rolin on a roof of the building would have been obvious from Komarnicki to ease servicing and avoid taking up valuable building space.

Similarly, to have equipped the supply and return ducts of Rolin with conventional distribution ducts and registers would have been obvious both in view of Komarnicki and what is known to be a conventional to those of skill in the building trades of which official notice is taken.

Regarding claims 5 and 6, Rolin illustrates a two-way valve 22 in the heating system and a three-way valve 23 in the cooling system. To have made either of these system valves identical to the other would have been obvious to reduce costs and advantageously avoid to stock different components for the chilled water and hot water systems.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 2 above, and further in view of Siegel.

Siegel discloses conventional hot and cold water risers that are used in modern large buildings to condition special spaces that air ducts cannot reach or are inconvenient to pipe to.

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To have added such risers to the hot and cold water supply of Rolin, to condition special or inconvenient spaces to pipe air to, would have been obvious to one of ordinary skill.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 2 above, and further in view of Foley et al.

Foley teaches a pool heater in combination with a building heating and cooling system. To have used the waste heat from the chillers of Rolin (the typical cool water source for large buildings) to heat a swimming pool in the building would have been obvious from the teaching of Foley et al.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claim 2 above, and further in view of Clark.

Clark discloses connecting the cold water supply system to the fire sprinklers of a building and it would have been obvious to have added this feature to the prior art to reduce costs.

Note Figures 2 and 3, which show 2-way, valves 53 and 55 and Figure 4 which shows three-way valves 57' and 59'.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over the aggregate of prior art used to reject claims 2-7. Claim 1 appears to be a simple aggregation of the claimed elements of claims 2-7 written in independent form. To the extent that claim 1 is enable (see first rejection in this office action) and descriptive of applicant's own system it is deemed to met by the references as applied to claims 2-7

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and the explanation of those references is incorporated here by reference here to conserve space and avoid needless repetition.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over USP 4,815,527 in view of USP 4,122,893.

To the extent that claim 8 can be understood, see Fig. 3 of USP '527. While a generic building is shown, no walls, ceilings, sleeping areas etc are explicitly disclosed. Nonetheless these are either inherent or completely obvious, official notice taken of conventional apartment buildings. A water sprinkler system 52 is shown having a feed side connected to feed coupling pipe 16 and a return side connected to return coupling pipe 17. The feed and return are separated by a "U-bend" at the right of Fig 3. A heat pump is shown in Figure 4 and is connected to the pipes 26 and 17 as disclosed in col. 6, lines 28-30.

USP '893 merely discloses that heat pumps such as shown in Figure 4 of USP '527 are typically room thermostat controlled as shown at 42 in USP '893, and to have done so in USP '527 to improve occupant comfort by allowing the occupant to control space temperature to his/her liking would have been obvious.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined teachings of Schuyler and Thompson.

Schuyler discloses ducts, registers and a water sprayed coil 57 to cool a space. To have piped any of units 18 of Thompson to an associated space using conventional ducts registers would have been obvious in view of Schuyler to improve air distribution. Furthermore, to have sprayed the coil 20 of Thompson to help humidify the air for improved comfort would have been obvious, as taught by Schuyler.

Claims 9 and 10 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by US 2002/0017107.

See Figures 7-9 and Fig. 1.

Any inquiry concerning this communication should be directed to John Ford at telephone number (571) 272-4911.



**John K. Ford**  
**Primary Examiner**